

REMARKS

Claims 1, 3-18, and 20-35 were pending in the current application. Applicants have amended claims 1, 3-9, 15-18, 23, 25, 29, 30, and 32-35. Reexamination and reconsideration of all pending claims are respectfully requested.

Claim Objections

The Office Action objected to various claims based on the wording employed or minor clerical errors, such as typographical errors. Applicants note that, for example, the minor wording errors in claims 5, 7, 9, 15, 16, 17, 18, 30, 32, 33, and 34 have been addressed, and submit that these claims are worded appropriately. Applicants thank the Examiner for identifying these minor errors.

Applicants take minor issue with one claim objection. Applicants submit that claim 1, the line 9 modification from "the" to "said" is unnecessary, as both words are appropriate in this instance. Applicants would prefer to retain the word "the" here, and submit that use of the word "the" is not improper or confusing in this context.

Applicants therefore submit that all claims, as amended, are worded acceptably and are in acceptable form.

35 U.S.C. §112

Written Description

The Office Action rejected claims 1, 3-18 and 20-34 under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the written description requirement.

In essence, the Office Action discusses FIGs. 2 and 4 of the present application and makes certain statements and rejections based solely on these two drawings and the wording in the Specification associated therewith. Applicants note that certain other drawings are present in the application, namely FIGs. 8 and 10, showing alternate modulator embodiments, and the present design is therefore not limited to the modulator design of FIG.

4. Applicants submit that sole reliance on FIGs. 2 and 4 of the present application when looking for support for the present claims is incorrect. However, Applicants do acknowledge that many of the statements made regarding FIGs. 2 and 4, such as those on pages 4 and 5 of the Office Action, are not inaccurate.

One statement made regarding claim 18 is that “not all the plurality of modulators 150a through 150d are configured to modulate each of a plurality of channel encoded data with an associated code...” Office Action, p. 6. Applicants have amended claims 1 and 18 to recite modulating each of a plurality of channels of data, and Applicants note that FIG. 2 illustrates the modulator 104 receiving data from BPSK channel encoder 103, QPSK channel encoder 102, as well as pilot and power control data. Modulation of multiple channels of data is shown in FIGs. 4, 8, and 10 of the present specification. Applicants submit that by these amendments to claims 1 and 18, claims 1 and 18 comply with the written description requirement.

The Office Action rejected claim 20 based on the “first adder” and “second adder” aspects of the claim. Applicants point to FIG. 10 of the present application, which shows two adders, 408 and 419. Applicants note that control data is provided, and data is also provided as fundamental channel data and supplemental channel data, as well as pilot data. Complex multiplication is shown in FIG. 10. Thus in looking to this embodiment, Applicants respectfully submit that claim 20 and claim 18 have support in the specification and both claims conform with the written description requirement.

The Office Action also calls out claim 23, discussing the “fourth modulator,” and Applicants have amended all “fourth modulator” claims to recite “a fourth modulator configured to provide a fourth stream of modulated symbols comprising a pilot channel of modulated symbols” (claim 23, with similar amendments to other “fourth modulator” claims). Applicants submit that these “fourth modulator” claims, as amended, satisfy the written description requirement of 35 U.S.C. §112.

Claims 1 and 3-17 have been similarly amended and by virtue of these amendments, Applicants submit that all claims now satisfy the written description requirements of 35 U.S.C. §112.

Definiteness

The Office Action rejected claims 3-9 and 17 under 35 U.S.C. §112, second paragraph, based on the language used in the “providing” limitations and the “modulation” limitations of those claims.

Regarding the “providing” limitations, Applicants have amended claims 3, 5, 7, and 9 to recite “providing said first stream of modulated symbols separately from said second stream of modulated symbols for said complex multiplying and merging said first stream of modulated symbols and said second stream of modulated symbols by said complex multiplying” (claim 3, with similar amendments to claims 5, 7, and 9). Applicants submit that this clarifies the separating aspect of these claims and how the recited streams are combined.

Applicants note that the rejection on page 8 of the Office Action simply contends that “it is unclear what is meant by the separation of different stream[s] of modulated symbols for the complex multiplying.” Applicants submit that the amendments to these claims clarify the language employed, but if for any reason these amendments are deemed insufficient, Applicants request a more precise explanation of any perceived lack of clarity in these amended claims.

With respect to the “modulating” limitations, Applicants have amended claims 6 and 8 and submit these claims, as amended, are sufficiently clear.

Applicants submit that claim 4 had been worded in a clear manner, but in an attempt to move prosecution forward, Applicants have amended claim 4 to recite that the modulating further comprises the limitations claimed and submit that this amendment addresses any issue with claim 4.

PATENT

Applicants therefore submit that all claims, as amended, are supported by the written description and are sufficiently definite, and therefore satisfy 35 U.S.C. §112.

CONCLUSION

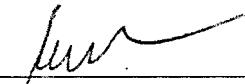
In view of the foregoing, it is respectfully submitted that all claims of the present application are in condition for allowance. Reexamination and reconsideration of all of the claims are respectfully requested and allowance of all the claims at an early date is solicited.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

Applicants believe that no fees are due in accordance with this Response beyond those included herewith. Should any fees be due, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment to Deposit Account No. 17-0026.

Respectfully submitted,

Date: December 15, 2008


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